Art 34 Amd't.

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AMENDED CLAIMS

1. Rotating stirring device comprising a mixing element operating according to the static mixer principle, fixed radially on a hollow shaft (1, 2), this mixing element containing a cavity filled by a packing, said cavity communicating on the one hand with the interior space of the hollow shaft, on the other hand with the fluid medium to be stirred.

2. Device according to claim 1, in which the mixing element comprises:
- two discs (5, 5') pierced in their centre;
- a fixing device (3) making the two discs (5, 5') integral with one another, delimiting a space between them; and
- a packing (4) arranged in the space thus delimited,
the hollow shaft being formed by an upper part (1) integral with the disc (5) and a lower part (2) integral with the disc (5').

3. Device according to claim 1 or 2, in which the hollow shaft (1, 2) contains an opening (6) in its upper part and an opening (7) in its lower part.

4. Device according to one of the previous claims, in which the fixing between the first and second disc (5, 5') is achieved by one or more spacers.

5. Device according to one of the previous claims, in which the opening (7) in the hollow shaft (2) is constituted by its end.

6. Device according to one of the previous claims, in which the opening (6) in the hollow shaft (1) is made in the side of the shaft.

7. Device according to one of the previous claims, in which there are fixed radially on the hollow shaft (1, 2) one or more pipe(s) communicating with the interior space of the shaft and filled with packing.

8. Device according to one of the previous claims, in which the packing (4) is composed of an assembly of solid elements made from metal, plastic, ceramic, glass material, disposed according to a regular or irregular arrangement.

9. Device according to claim 8, in which the packing (4) is made up of one or more layers of mesh.

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10. Device according to claim 9, in which the mesh is of metal.

11. Use of the device according to one of the previous claims for the preparation of dispersions and/or emulsions of immiscible liquids.

12. Method for preparing a dispersion or emulsion of immiscible liquids by means of a rotating stirring device comprising a mixing element operating according to the static mixer principle, fixed radially to a hollow shaft (1, 2), this mixing element containing a cavity filled by a packing (4), said cavity communicating on the one hand with the interior space of the hollow shaft, on the other hand with the fluid medium to be stirred, in which the stirrer is rotated, the liquids to be mixed are aspirated through the hollow shaft under the effect of the centrifugal force, and mix thoroughly while passing through the packing before being expelled at the periphery of the packing (4).

13. Method according to claim 12, in which one of the liquids enters by the upper part (1) and the other by the lower part (2) of the hollow shaft.

14. Method according to claim 12 or claim 13, in which the rotating stirring device is the device according to one of claims 2 to 10.

15. Method according to one of claims 12 to 14, in which the interface between the two liquids is situated at the level of the packing (4).